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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/883,899      | 06/18/2001  | Reiko Kondo          | 0941.65628          | 2563             |

24978 7590 03/24/2003

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EXAMINER

KLIMOWICZ, WILLIAM JOSEPH

ART UNIT

PAPER NUMBER

2652

DATE MAILED: 03/24/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

|                 |                      |              |              |
|-----------------|----------------------|--------------|--------------|
| Application No. | 09/883,899           | Applicant(s) | KONDO ET AL. |
| Examiner        | William J. Klimowicz | Art Unit     | 2652         |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1) Responsive to communication(s) filed on \_\_\_\_.  
2a) This action is FINAL. 2b) This action is non-final.  
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

4) Claim(s) 1-8 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
5) Claim(s) \_\_\_\_ is/are allowed.  
6) Claim(s) 1-8 is/are rejected.  
7) Claim(s) \_\_\_\_ is/are objected to.  
8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

9) The specification is objected to by the Examiner.  
10) The drawing(s) filed on 18 June 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.  
12) The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.  
14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.  
15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

1) Notice of References Cited (PTO-892)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.  
4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_.  
5) Notice of Informal Patent Application (PTO-152)  
6) Other: \_\_\_\_

**DETAILED ACTION**

***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoshiya et al. (JP 8-339514 A).

As per claims 1 and 8, Hoshiya et al. (JP 8-339514 A) discloses a magnetic head comprising: a magnetoresistance film (10); a flux guide (11) guiding a signal magnetic field (64) from a magnetic recording medium (91) to said magnetoresistance film (10); and a flux-guide regulating film (37 and/or 38) aligning magnetic domains of said flux guide (11) into a single magnetic domain (i.e., a magnetic domain control layer which is a head bias layer or an antiferromagnetic film - see abstract).

As per claim 2, said flux guide (11) is formed as a separate element from said magnetoresistance film (10).

As per claim 3, said flux guide is formed as a part of said magnetoresistance film (10) - see FIG. 8.

As per claim 4, wherein at least one of sides and surfaces of said flux-guide regulating film (37 and/or 38) is magnetically connected with said flux guide (11). See FIGS.

As per claim 5, wherein the flux-guide regulating film (37 and/or 38) is one of a highly coercive-force film and an antiferromagnetic film. See abstract of Hoshiya et al. (JP 8-339514 A).

As per claim 6, said flux-guide regulating film (37 and/or 38) also aligns magnetic domains of said magnetoresistance film (11) into a single magnetic domain. See abstract of Hoshiya et al. (JP 8-339514 A).

As per claim 8, Hoshiya et al. (JP 8-339514 A) additionally discloses a magnetic reproducing device (FIG. 2) comprising a magnetic head (90) which includes the structure as set forth, *supra*.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoshiya et al. (JP 8-339514 A).

See the description of Hoshiya et al. (JP 8-339514 A), *supra*.

With regard to claim 7, although Hoshiya et al. (JP 8-339514 A) remains silent with respect to the specific type of magnetoresistance film as being one of a spin-valve type and a

tunnel-junction type, Official notice is taken that magnetoresistance films being formed of one of a spin-valve type and a tunnel-junction type are notoriously old and well known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the magnetoresistance film (10) of Hoshiya et al. (JP 8-339514 A) as being a conventional spin-valve type and a tunnel-junction type as is well known.

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the magnetoresistance film (10) of Hoshiya et al. (JP 8-339514 A) as being a conventional spin-valve type and a tunnel-junction type as is well known in order to provide enhanced sensitivity of the reading sensor by increasing the MR ratio using such conventionally known spin-valve type or tunnel-junction type MR sensors, as is well known, established and appreciated in the art.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (703) 305-3452. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Art Unit: 2652

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

*WJK*  
William J. Klimowicz  
Primary Examiner  
Art Unit 2652

WJK  
March 19, 2003